where hatch beams are of such design that:

(1) The width of the flange is 50 percent or more of the height of the web; and

(2) The flange rests flat on the deck when the hatch beam is stood upright.

(c) Strongbacks, hatch covers, and pontoons removed from hatch openings and placed on the weather deck shall not obstruct clear fore-and-aft or coaming-to-bulwark passageways and shall be lashed or otherwise secured to prevent accidental dislodgement. Dunnage or other suitable material shall be used under and between tiers of strongbacks and pontoons to prevent them from sliding when stowed on steel decks.

(d) Hatch covers unshipped in an intermediate deck shall be placed at least three feet (.91 m) from the coaming or they shall be removed to another deck. Strongbacks unshipped in an intermediate deck shall not be placed closer than six inches (15.24 cm) from the coaming and, if placed closer than three feet (.91 m), shall be secured so that they cannot be tipped or dragged into a lower compartment. If such placement or securement is not possible, strongbacks shall be removed to another deck.

(e) Any hatch beam or pontoon left in place next to an open hatch section being worked shall be locked or otherwise secured, so that it cannot be accidentally displaced. All portable, manually handled hatch covers, including those bound together to make a larger cover, shall be removed from any working section, and adjacent sections, unless securely lashed.

(f)(1) The roller hatch beam at the edge of the open section of the hatch shall be lashed or pinned back so that it cannot be moved toward the open section.

(2) Rolling, sectional or telescopic hatch covers of barges that open in a fore and aft direction shall be secured against unintentional movement while in the open position.

(g) Hinged or folding hatch covers normally stowed in an approximately vertical position shall be positively secured when in the upright position, unless the design of the system otherwise prevents unintentional movement.

(h) Hatches shall not be opened or closed while employees are in the square of the hatch below.

(i) All materials such as dunnage, lashings, twist locks, or stacking cones shall be removed from the hatch cover or be secured to prevent them from falling off the cover before the hatch cover is moved.

(j) When a hatch is to be covered, hatch covers or night tents shall be used. Any covering that only partially covers the hatch, such as alternate hatch covers or strips of dunnage, shall not be covered by a tarpaulin. Exception: A tarpaulin may be used to cover an open or partially open hatch to reduce dust emissions during bulk cargo loading operations, if positive means are taken to prevent employees from walking on the tarpaulin.

[62 FR 40202, July 25, 1997, as amended at 65 FR 40944, June 30, 2000]

Subpart F—Vessel's Cargo Handling Gear

§ 1918.51 General requirements (See also § 1918.11 and appendix III of this part).

(a) The safe working load specified in the cargo gear certification papers or marked on the booms shall not be exceeded. Any limitations imposed by the certificating authority shall be followed.

(b) All components of cargo handling gear, including tent gantlines and associated rigging, shall be inspected by the employer or a designated person before each use and at appropriate intervals during use. Any gear that is found unsafe shall not be used until it is made safe.

(c) The employer shall determine the load ratings shown on the vessel's wire rope certificates for all wire rope and wire rope slings comprising part of ship's gear and shall observe these load ratings.

(d) The following limitations shall apply to the use of wire rope as a part of the ship's cargo handling gear:

(1) Eye splices in wire ropes shall have at least three tucks with a whole strand of the rope and two tucks with one-half of the wire cut from each

strand. Other forms of splices or connections that the employer demonstrates will provide the same level of safety may be used;

(2) Except for eye splices in the ends of wires, each wire rope used in hoisting or lowering, in guying derricks, or as a topping lift, preventer, segment of a multi-part preventer, or pendant, shall consist of one continuous piece without knot or splice; and

(3) Wire rope and wire rope slings exhibiting any of the defects or conditions specified in §1918.62(b)(3)(i) through (vi) shall not be used.

(e) Natural and synthetic fiber rope slings exhibiting any of the defects or conditions specified in §1918.62(e) (1) through (7) shall not be used.

(f) Synthetic web slings exhibiting any of the defects or conditions specified in §1918.62(g)(2)(i) through (vi) shall not be used.

(g) Chains, including slings, exhibiting any of the defects or conditions specified in §1918.62 (h)(3) (iii), (iv), or (h)(6) shall not be used.

[62 FR 40202, July 25, 1997, as amended at 65 FR 40944, June 30, 2000]

§1918.52 Specific requirements.

(a) *Preventers.* (1) When preventers are used they shall be of sufficient strength for the intended purpose. They shall be secured to the head of the boom independent of working guys unless, for cast fittings, the strength of the fitting exceeds the total strength of all lines secured to it. Any tails, fittings, or other means of making the preventers fast on the deck shall provide strength equal to that of the preventer itself.

(2) Wire rope clips or knots shall not be used to form eyes in, nor to join sections of, preventer guys.

(b) *Stoppers.* (1) Chain topping lift stoppers shall be in good condition, equipped with fiber tails, and long enough to allow not fewer than three half-hitches in the chain.

(2) Chain stoppers shall be shackled or otherwise secured so that their links are not bent by being passed around fittings. The point of attachment shall be of sufficient strength and so placed that the stoppers are in line with the normal topping lift lead at the time the stopper is applied.

(3) Patent stoppers of the clamp type shall be appropriate for the size of the rope used. Clamps shall be in good condition and free of any substance that would prevent their being drawn tight.

(c) *Falls.* (1) The end of the winch fall shall be secured to the drum by clamps, U-bolts, shackles, or other equally strong methods. Fiber rope fastenings shall not be used.

(2) Winch falls shall not be used with fewer than three turns on the winch drum.

(3) Eyes in the ends of wire rope cargo falls shall not be formed by knots and, in single part falls, shall not be formed by wire rope clips.

(4) When the design of the winch permits, the fall shall be wound on the drum so that the cargo hook rises when the winch control lever is pulled back and lowers when the lever is pushed forward.

(d) *Heel blocks.* (1) When an employee works in the bight formed by the heel block, a preventer at least three-quarters of an inch (1.91 cm) in diameter wire rope shall be securely rigged, or equally effective means shall be taken, to hold the block and fall if the heel block attachments fail. Where physical limitations prohibit the fitting of a wire rope preventer of the required size, two turns of a one-half inch (1.27 cm) diameter wire rope shall be sufficient.

(2) If the heel block is not so rigged as to prevent its falling when not under strain, it shall be secured to prevent alternate raising and dropping of the block. This requirement shall not apply when the heel block is at least 10 feet (3.05 m) above the deck when at its lowest point.

(e) *Coaming rollers.* Portable coaming rollers shall be secured by wire preventers in addition to the regular coaming clamps.

(f) *Cargo hooks.* Cargo hooks shall be as close to the junction of the falls as the assembly permits, but never farther than two feet (.61 m) from it. Exception: This provision shall not apply when the construction of the vessel and the operation in progress are such that fall angles are less than 120 degrees.